In the Claims

1. (Currently Amended) A method for route discovery, the method comprising the steps of:

determining that a first node needs to communicate with a second node, wherein the first and the second nodes are part of an underlay ad-hoc communication system;

sending, by the first node, a message to an overlay communication system notifying the overlay communication system of the need to communicate with the second node;

receiving by the first node, from the overlay communication system, instructions to broadcast a route-discovery message;

broadcasting the route discovery message within the underlay communication system;

receiving by the first node, a message instructing nodes within the ad-hoc communication system to stop flooding route discovery messages; and

receiving by the first node route information from the overlay communication system.

2. (Original) The method of claim 1 wherein the step of sending the message to the overlay communication system comprises the step of sending the message to a cellular communication system.

3. (Original) The method of claim 1 wherein the step of receiving route information comprises the step of receiving a sequenced list of IP addresses.

4. (Previously Amended) A method comprising the steps of:

receiving, by a first node, from an overlay communication system, a message instructing the first node to broadcast a route discovery message, wherein the first node exists within an underlay communication system; and

broadcasting the route discovery message within the underlay communication system.

5. (Original) The method of claim 4 wherein the step of receiving from the overlay communication system comprises the step of receiving from a cellular communication system.

6. (Currently Amended) A method for operating a node within an underlay communication system, the method comprising the steps of:

receiving a message instructing nodes within an ad-hoc communication system to listen for a route discovery message from a first node and a route discovery message from a second node;

receiving ~~a~~ the route-discovery message from a first node, wherein the first node is part of an underlay communication system;

receiving ~~a~~ the route-discovery message from a second node, wherein the second node is part of the underlay communication system;

determining identifications of senders of the route-discovery messages;

determining if the identifications are contained within the message instructing the nodes to listen for the route discovery message;

determining route information based on the route-discovery messages; and

transmitting the route information through an overlay communication system to the first node.

7. (Cancelled).

8. (Cancelled).

9. (Original) The method of claim 6 wherein the step of transmitting the route information comprises the step of transmitting the route information through an overlay cellular communication system.

10. (Previously Amended) A method comprising the steps of:

receiving at a base station in an overlay communication system, a message from a first node in an underlay communication system, the message indicating a need to discover a route to a second node;

broadcasting by the base station, a message to nodes within the underlay communication system, the message instructing the nodes to monitor for flood messages from the first and the second nodes;

receiving by the base station a message from a third node in an underlay communication system, the message comprising route information; and

transmitting by the base station, the route information to the first node.

11. (Cancelled)

12. (Cancelled).

13. (Original) The method of claim 10 wherein the step of receiving the route information from the third node comprises the step of receiving a sequenced list of IP addresses from the third node.

14. (Previously Amended) The method of claim 10 further comprising the step of transmitting by the base station, a flood stop message causing nodes within the underlay communication system to cease transmission of flood messages.

15. (Currently Amended) An apparatus comprising:

means for determining that a first node needs to communicate with a second node, wherein the first and the second nodes are part of an underlay communication system;

means for sending, by the first node, a message to an overlay communication system notifying the overlay communication system of the need to communicate with the second node;

means for receiving by the first node, from the overlay communication system, instructions to broadcast a route-discovery message;

means for broadcasting by the first node, the route discovery message;

means for receiving by the first node, a message instructing nodes within the ad-hoc communication system to stop flooding route discovery messages; and
and

means for receiving by the first node route information from the overlay communication system.

16. (Previously Amended) An apparatus comprising:

means for receiving, by a first node, from an overlay communication system, a message instructing the first node to broadcast a route discovery message, wherein the first node exists within an underlay communication system; and

means for broadcasting the route discovery message within the underlay communication system.

17. (Currently Amended) An apparatus comprising:

means for receiving a message instructing nodes within an ad-hoc communication system to listen for a route discovery message from a first node and a route discovery message from a second node;

means for receiving ~~a~~ the route-discovery message from a first node, wherein the first node is part of an underlay communication system;

means for receiving ~~a~~ the route-discovery message from a second node, wherein the second node is part of the underlay communication system;

means for determining identifications of senders of the route-discovery messages;

means for determining if the identifications are contained within the message instructing the nodes to listen for the route discovery message;

means for determining route information based on the route-discovery messages; and

means for transmitting the route information through an overlay communication system to the first and the second nodes.

18. (Previously Amended) An apparatus comprising:

means for receiving at a base station in an overlay communication system, a message from a first node in an underlay communication system, the message indicating a need to discover a route to a second node;

means for broadcasting by the base station, a message to nodes within the underlay communication system, the message instructing the nodes to monitor for flood messages from the first and the second nodes;

means for receiving by the base station a message from a third node in an underlay communication system, the message comprising route information; and

means for transmitting by the base station the route information to the first nodes.